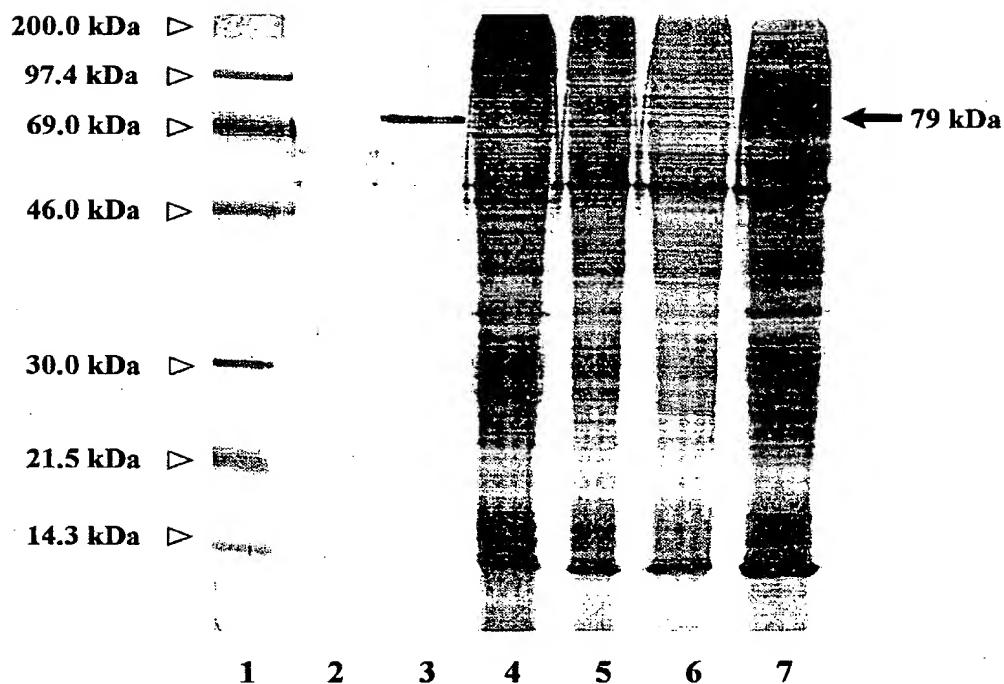




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FIG. 1



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FIG. 2

Peptide 1 KVTIFFGTQK

Peptide 2 KVVVDLDDYAADDDEFEEK
E

Peptide 3 KWFTEVAK
D

Peptide 4 KVVDEIIVEK

Peptide 5 KYADLLNFPK

Peptide 6 KAALHALAK

Peptide 7 KDVHRTLHTIVQEQQSLDSSK

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FIG. 3

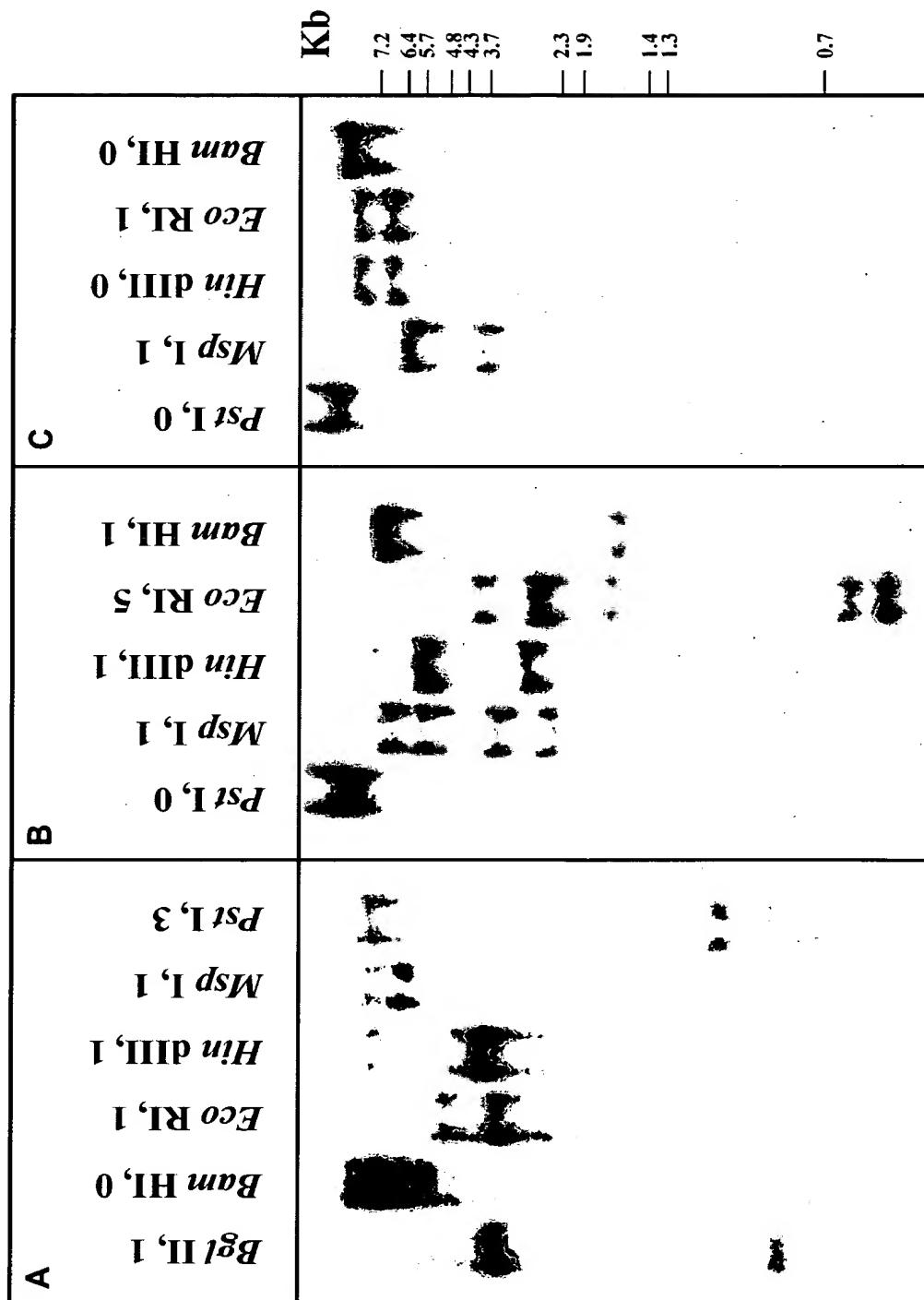
<i>Arabidopsis thaliana</i>	..	350	GSPLES-AVPPPFPGPCT
<i>Catharanthus roseus</i>	..	389	GTPLAGSSLPPPFP-PCT
<i>Helianthus tuberosus</i>	..	331	GTPLGGPTLQPPFP-PCT
<i>Vigna radiata</i>	..	366	GTSLGG-SLLPPFPGPCT
<i>Vicia sativa</i>	..	367	GTSLGG-SLLPPFPGPCT

LGTGLARYADLLNPPRKSALVALAAYATEPSEARKLKHLTSPDGKD
LRTALTRYADLLNTPKKSALLALAAYASDPNEADRALKYLASPAGKD
LRKALTNYADLLSSPKKSTLLALAAEASDATEADRLQFLASREGKD
LRTALARYADLLNPPRKAALLALATEASEPS - DKRLXFLSSPQGKD
VRTALACYADLLNPPRKAIAVALAAHASEPSEARRLKFLSSPQGKD

SCQDWAPSRVHVT SALVY GPTPTGRIHKGV C STWMKNAVP 498..
SSPRMAPSRIHVT CALVY EKTPGGRIHKGV C STWMKNAIP 537..
SSPKMVPNRIHVT CALVY EKTPGGRIHKGIC STWMKNAVP 479..
SSPRFAPQRVHVT CALVY GPTPTGRIHKGV C STWMKNAIP 513..
SSPRFAPQRVHVT CALVEGPTPTGRIHKGV C STWMKSATP 515..

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FIG. 4



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FIG. 5

1	MEQTAVKVSL	FDLFSSILNG	KLDPSNFSSD	SSAAILIENR	EILMILTTAI	50
	MGSNNLANSI	ESMLG.ISIG	...SEYISD	P.....	.IFIMVTTVA	
*	*	*	*	**	*	**
51	AVFIGCGFLY	VWRRSSNKSS	KIVETQKLIV	EKEPE.PEVD	DGKKKVTIFF	100
	SMLIGFGFFV	CMK.SSSSQS	KPIETYKPII	DKEEEEIEVD	PGKIKLTIFF	
***	***	***	***	***	***	***
101	GTQTGTAEKF	AKALAEAAKA	RYEKAIFKVI	DLDYDYGADDD	EFEEKLKKEF	150
	GTQTGTAEKF	AKALAEELKA	KYKKAVVKKVV	DLDYDAAEDD	QEYEEKLKES	
*****	*****	*****	***	*****	*****	*****
151	IALFFLATYD	DGEPTDNAAR	FYKWFTEGKE	REMWLQNLQF	GVFGLGNRQY	200
	LVFFFMVATYD	DGEPTDNAAR	FYKWFTEQHE	RGEWLQQLTY	GVFGLGNRQY	
***	***	*****	***	***	*****	*****
201	EHFNKVAKEV	DEILTEQGGK	RIVPVGLGDD	DQCIEDDFTA	WRELVWPELD	250
	EHFNKIAVDV	DEQLGKQGAK	RIVQVGLGDD	DQCIEDDFTA	WRELLWTELD	
*****	***	***	*****	*****	*****	***
251	QLLLDESDKT	SVSTPYTAIV	PEYRVVFHDA	TDASLQDKNW	SNANGYTVYD	300
	QLLKDEDAAP	SVATPYIATV	PEYRVVIHET	TVAALDDKHI	NTANGDVAFD	
***	***	***	***	***	***	*
301	VQHPCRANVV	VKKELHTPVS	DRSCIHLEFD	ISGTGLTYET	GDHVGVYSEN	350
	ILHPCRTIVA	QRELHKPKS	DRSCIHLEFD	ISGSSLTYET	GDHVGVYAAEN	
***	***	***	*****	***	*****	***
351	CVEVVEEAER	LLGYSSDTVF	SIHVDKEDGS	PISGSALAPP	FPTPCTLRTA	400
	CDETVEEAGK	LLGQPLDLLF	SIHTDKEDGS	PQGSS..LPP	FPGPCTLRSA	
***	***	***	*****	***	*****	*
401	LTRYADLLNS	PKKAALHALA	AYASDPKEAE	RLRYLASPAG	KDEYAQWIVA	450
	LARYADLLNP	PRKASLIALS	AHASVPSEAE	RLRFLSSPLG	KNEYSKWVVG	
***	***	***	***	***	***	*
451	SQRSLLVVMA	EFPSAKAPIG	VFFAAVAPRL	LPRYYSISSS	NRMVPSRIHV	500
	SQRSLLEIMA	EFPSAKPPLG	VFFAAVAPRL	PPRYYSISSS	PKFAPSRIHV	
*****	**	*****	*****	*****	*****	*****
501	TCALVHEKTP	AGRVHKGVCS	TWMKNSVSLE	ENHDCSSWAP	IFVRQSNFKL	550
	TCALVYQSP	TGRFHGVCS	TWMKHAVPQD	S.....WAP	IFVRTSNFKL	
*****	*	***	***	***	*****	*****
551	PADSTVPIIM	IGPGTGLAPF	RGFMQERLAL	KNSGVELGPA	ILFFGCRNRQ	600
	PADPSTVPIIM	VGPGTGLAPF	RGFLQERMAL	KENGAQLGPA	VLFFGCRNRN	
***	***	*****	***	***	*****	*****
601	MDYIYEEELN	NFVKEGAISE	VVVAFSREGA	TKEYVQHKMA	EKASYIWEMI	650
	MDFIYEEDELN	NFVERGVISE	LVIAFSREGE	KKEYVQHKMM	EKATDVWNVI	
***	***	***	***	*****	***	*
651	SQGAYLYVCG	DAKGMDRVH	RTLHTIAQEQQ	GSLDNSKTES	LVKNLQMDGR	700
	SGDGYLYVCG	DAKGMDRVH	RTLHTIAQEQQ	GMESSAAEA	AVKKLQVEER	
*	*****	*****	*****	***	***	*
701	YLRDVW					
	YLRDVW					
*****	*****					

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CGGCACGAGCTGGTTAGTATCTCTAGGGTTGAAAAGAACGGGAGAACGGCACAGGGAGAACAAAAGTCGAATCTACTTGAATACAT
TCGATTGCTTCTCTGTTAAGCTTCAGAGTCTCTGCTTAATTATGGGTTCGAATAATTAGCTAATTAGCTAATTGCGATTGATCGA
TGTAGGAATATCAATAGGATCAGAATATTTCTGACCCAATTTCATTATGTCACAACCTGAGCTTCAATGCTGATT
GGATTGGTTCTCGCATGTGATGAAATCTCGTTCAATCAAACCTATTGAAACTATAACCAATAATTGATAA
AGAAGAAGAGGAGATTGAAAGTTGATCCTGGTAAAGTAAAGCTCAACTATTTGGTACTCAGACTGGTACTGCTGAAG
GATTGGCTAAGGCATTGGCAGAAGAAATTAGGCAAGTACAAGAACGAGTTGTTAAAGTAGTTGACCTGGATGACTAT
GCAGCCAGGGATGATCAATATGAAGAGAAATTAGGAGGAGCTGGTGAACGATGATCAATGCGTACCTTATGGTATGGT
TGAGCCAACTGACAATGCTGGCAGATTTCAGTTGCTCAAGAACATGAAAGGGAGAGTGGCTTCAAGCAACTAA
CTTATGGTTTTGGTTGGTAAACCGTCAATACGAGCATTCAACAAAGATCAGGGTAGATGTTGAGCAACTCGGT
AAACAAGGTGCAAAGGCATTGTTCAAGTGGGCTGGTGAACGATGATCAATGCGTACCTTATGGTATGGT
AGAATTGGTTGGACTGAAATTGGATCAGTTGCTCAAGATGAGGAATGCTCAGTGGCTACACCGTATATGCTA
CTGTTCTGTGATAACAGGGTAGTGTGATTCACGAAACTACAGGTGCGGGCTCTGGATGATAAACACATAAATCTGCTAACGGC
GATGTTGCAATTGATATTCTCCATCTTGAGAACCTTGTCTCAACAAAGAGAGCTCACAACACCAAGTCTGATGGT
ATCCCTGTTGATACATCTGGAGTTGCAATATCAGGCCTTCTCTGATGACTGGAGATCATGTTGGTTTATGCTG
AGAAACTGCGATGAAAATGTCGAGGAAGCAGGAAGCTGTTGGGTCAACCCCTGATGTTGGTCAATTACACGGGAT
AAAGAACGGGTCAACCACGGGAAGCTCATACACCTCCTTCCAGGGTCCACCTTACGATCTGCCTAGCAG
CTATGCTGATCTTGTGATCTCTGATCCTGGCTTCTCTGATTGCTCTGCTCATGCACTGTACCCAGTGAAGCAG
AGAGATTGCGCTTTTGTCATCACCTCTGGAAAAGAATGAGTATTCAAAATGGTAGTTGAGGAGTCTT
GAGATCATGGCCGAGTTCCATCAGCAAAACCCCTCTGGTTTCTGGCTTCTGGCTTACGGGCTTACGGCCTCG
ATACTATTCTATCTCATCTCTCTGATGAGTTGCTCCCTCAAGAAATTGTCAGTGAAGTGTGCTTAGTATGGTCAAAGCC
CTACCGGAAGGGTTCACCGAGGAGTTGTTGACATGGATGAAGCATGCAGTTCCTCAGGATAGCTGGGCTCTT
GTTGCAACGTCAAACTCAAGTTACCGCTGACCCCTCAACTCCAAATTATGAGTGGAGAACGGCTGGTACAGGGTTAGCTCC
TTTCAGAGGATTCTGCAAGGAACAAATGGCCCTCAAGGAAAATGGTCTCAACCTGGCCAGATGTCCTTTTGGAT
GTTAGGAATCGTAATATGACTTCATTATCAAGACGAACTAACAAACTTCGTTGGAACGAGGAGTAATTGGAGCTAGTT
ATTGCTTTCACGTGAAGGGAAAAGGAATATGTTCAACATAAGATGAGTGGAGAACGGCAACGGATGTTGGAGATG
GATATCAGGGGACGGTTATCTCTATGTTGGTGTGGTCAAGGGAATGGCCAGAGATGTCCTCATGCACGTTGCAATCCA
TTGCCCAAGAACAGGGACCCATGGAAATCATCTGTCAGTGAAGCTGCAAGTAAGAACCTCAAGTTGAAACGATATCTA
AGAGATGCTGGTGTGATCGAATGAGCTGGCAAGTCCCTCAAGACATCCCTCGATTCTCCAGTGGTCCAATCGAAAGCTGGTATAA
ATCCTCTCTGAAAATCCCAAGCATTCCAGACATCCCTCGATTCTCCAGTGGTCCAATCGAAAGCTGGTATAA
TTGAGAGGAGTGCACATTGTGACTACATGAGAACACATGAAATACCAATGAGAATTAGAAAGATCAAATTCTCTT
GAACAATGTTACAGGCAAACACTGTTGCTTAATAAAATTCAACCCATGGGTGGACAACACTGAAACAGTATTAG
CTATACCAACAAAGTTATGCAAGGAAACACAAACTAGTTAGCTCTTGGATTGATTACTGTAAGTTCTAACCCAGA
TGATAGATTGACTTAAAGATTCTGTTTCTTATGGCTACCGAGGGAGTATTTAATGCTTGGAGTTGAGTTGAGAAAAAA

FIG. 6a

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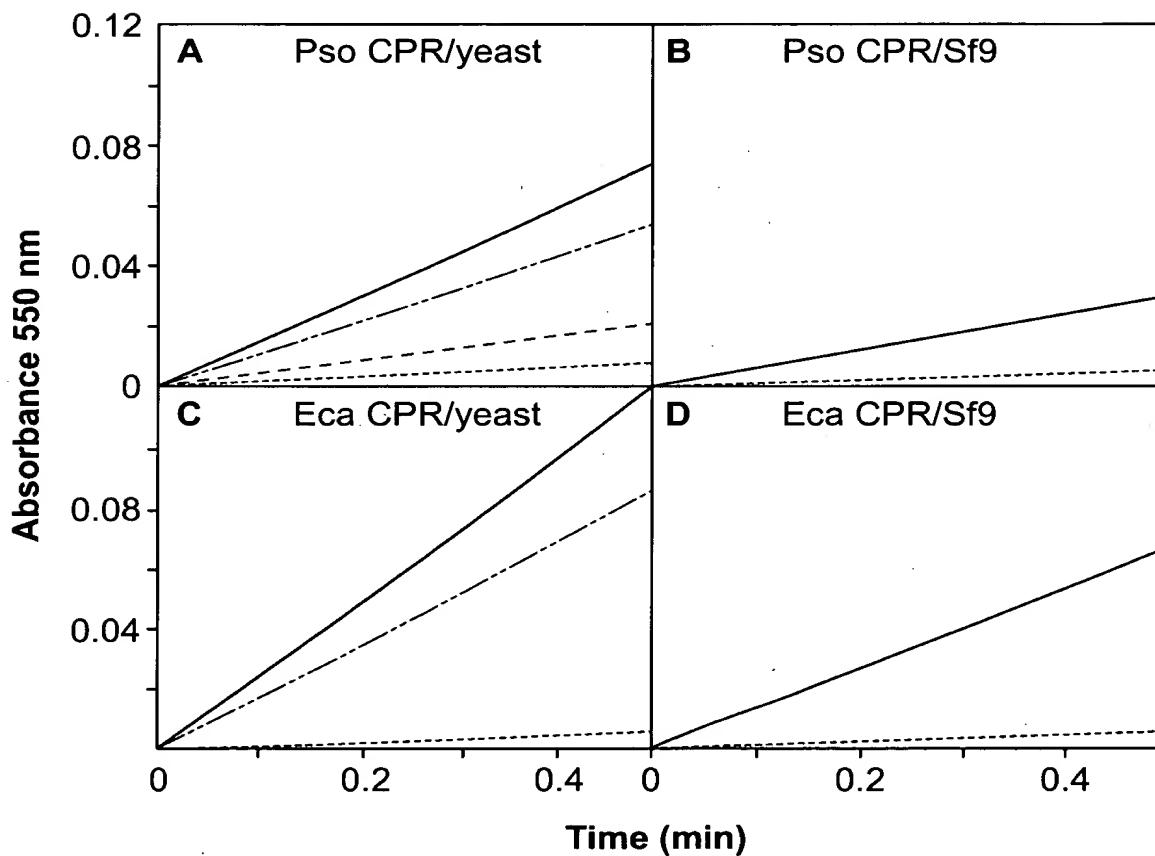
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CATCATCCCTGAAACCTTATCGCTTTGACCTTTGGATCGCTGAACCTTTCTCAGATTCAAGTGCCTATTGGTATTGAA
ATCTATTCTCGATACTTAATGGAAAGTTGGATCGCTGAACACTGCTATTGCTGTTTATCGGTTGGTTCTACGTTGGAAAGATC
ATCGTGAGATTTATGATCTTAAACACTGCTATTGCTGTTTATCGGTTGGTTCTACGTTGGAAAGATGATGATGGAA
TCAAAATAAGTGCAGTAAAATTGGTAAACTCAGAAATTGATGGTAAAGGAAACCTGAAGTGAAGTTGATGGAA
AGAAGAAGGTTACTATCTTGGTACTCAACTGTTAAAGTGAATTGATCTGGATGATTACGGAGCAGATGATGAATTGAAAGGAA
GCAAGAATGAAAGCAATCTTAAAGTGAATTGATCTGGATGATTACGGAGCAGATGATGAATTGAAAGGAA
GAAAAGGAAACTATAGCTCTTTGGCTACCTATGGGATGGTAAAGGAAACCTACAGATAATGCTGCAAGATTATA
ATGGTTCAAGGGAGAGGGAAATGGTAAAGGCAATCTTAAAGTGAATTGATCTGGATGATTACGGAGCAGATGATGAATTGAAAG
GCAAGAATGAAAGGAAACTATAGCTCTTTGGCTACCTACAGATAAGGAGGAACTGAGCAATTGCAACTGCTGGTAAAGGAA
TAGGAGATGATGATCAATGCAATGCAATGAAAGATGATGGGATGGGAGGTTGGCTACACTGAACAGGGGGAGTTGGATCAGTTGCTC
CTTGTGAAAGTGAATAAACATCTGTTACTCCTTACCTACAGTCAACTGCAATTGCAACTGCTGGTAAAGGAGGTTGGATCAGTTGCTC
TACTGATGCACTCACTACAAGAACAAAATCTGAGCAATTGCAACTGCTGGTAAAGGAGGTTGGATCAGTTGCTGCAACTGAG
CCAATGTGTTGTAAGAAGGGCTTCAACTCCAGTATCTGATGTTCTGGTATTCACTCTGGAAATTGACATTCTGGC
ACTGGCTCACGTGAAACAGGAGGACATGCGGTTTACTCTGAGAATTGTTGAAGTTGAGGTTGAGAAGCAGAG
GCTATTGGGTTACTCATGACACCCGTTTCAATCATGTCGATAAAGGGAGGCTCACCCATTAGTGGAAAGC
TAGCTCCCTTCCAACCTCCCTGCACTTAAGAACAGCACTAACAGATAACGATAGCTGATCTGGTAAATTCTCCAAAGAAG
GCTGCTTGATGCTTGGCTTATGCGATCCGATCAAAGGAAGGGGAGGCACTAAGGTTGCTCTGCTAGTGGCTGAAATTCCCATGAG
GAAGGACGAATAGGCCAGTGGATAGTAGCTAGTCAGAGAAAGTCTGCTAGTGGCTGATCTGGTAAATTCTCCAAAGAAG
CTCCAATTGGGTTTCTTGAGCAGTAGCTCCCTGCTGTTGCAAGATACTTCTTCAATTCTCCAAATTAGGATG
GTACCATCTAGGATTCTGTCACATGTCATTGGTGCATTTGGTGAAGAAAACCATGATTGCGAGCTGGGACTGGGATTC
AACCTGGATGAAAGAATTCTGTTGGTCAAGTACCAATTATAATGATTGGGACCCGTATCTCTTGGATGCAAAACAGACA
ACTTCAAACCTCCCTGCTGATTCTACAGTACCAATTATAATGATTGGGACCCGTATCTCTTGGGACTGGGATTC
ATGCGAGGCGATTAGCTGAAAGAATTCTGGTGTAGAATTGGGAGGACTATCTCCGAAGGTTAGCTCCTAGGAAATGATCTCAAGGT
GCTTATCTTATGTTATGTTGATGCCAAGGGCATGGCTAGAGAGTACATCGAACCTCCACACATTGCCCAGGAAACA
GGGATCTTGGACAACCTCGAAGAACCGGAAAGCTTGGTGAAGAATCTACAGATGGATGGAAAGCTTACGTGATGTTG
GATTGATTCTTCAAGCACGGTTACAACTGAGCTAACAAACTTGTGAAGAGGGAGCTATCTCCGAAGGTTAGCTCCT
ATGATTTCAGAAGAAAATGCTTATATACTTGGGACATTAAAGAACGCGCTTGAGAAGCTAAATCTAGTTGAGAGATG
TGTGATTTCAGAAGAAAATGCTTATATACTTGGGACATTAAAGAACGCGCTTGAGAAGCTAAACTGTTAATCCTGT
AAAAAGGGATTGCTGTTGGCTGCAATCAATTAAAGTTATATTCTGGTCTATGGCATTGTTAGACAAATAT
ATTAACCGAATTGTCCTTATATGACATATGAAACCTCTGGGAGGAGAAAAAA

FIG. 6b

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FIG. 7

Heterologous Expression of P-450 Reductases



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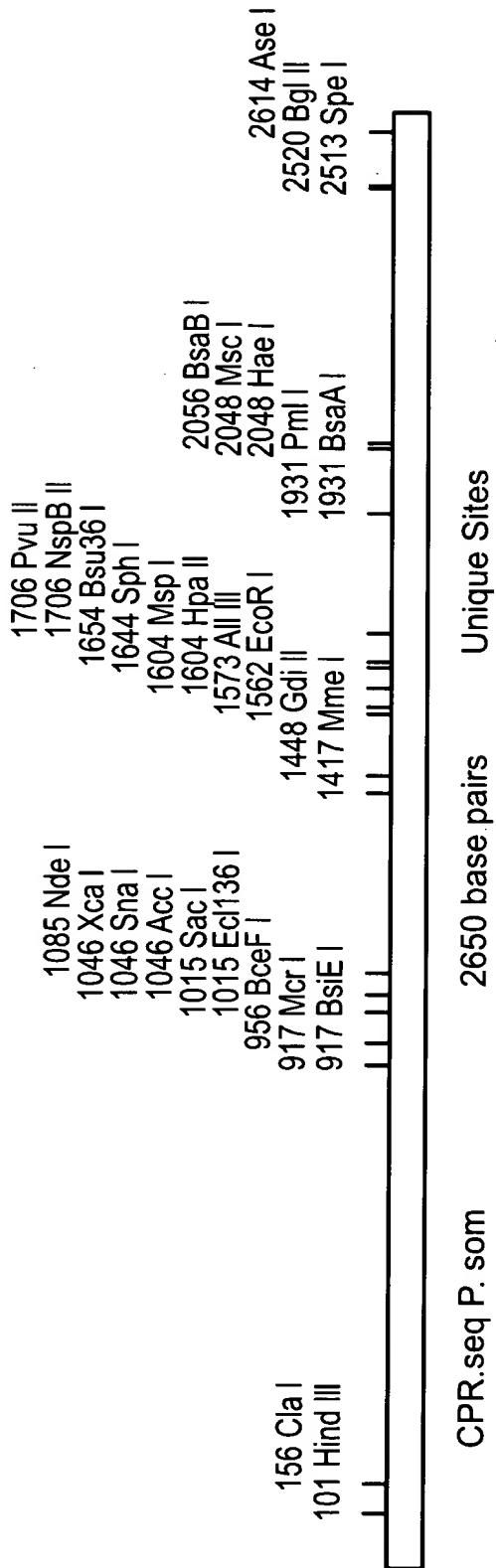


FIG. 8a

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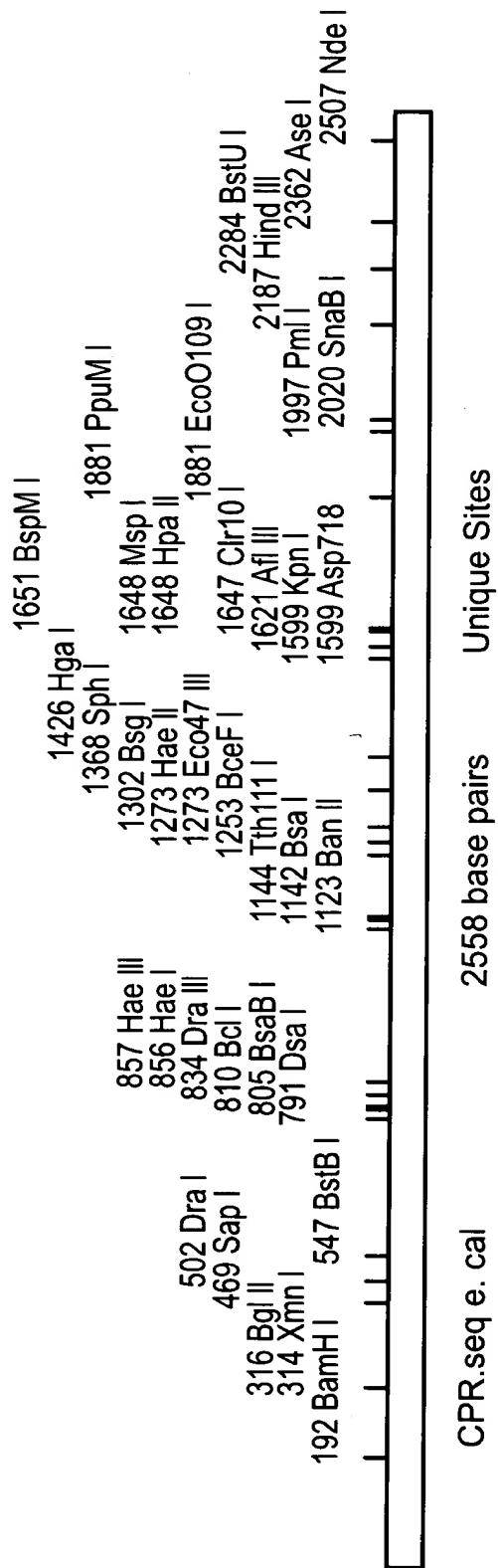


FIG. 8b

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FIG. 9a (1)

1/1 31/11
CGG CAC GAG CTT GTT AGT ATC TTC TAG GGT TTG AAA AGA AGC ACA GGG AGA AGC AAA AGT
R H E L V S I F * G L K R S T G R S K S
61/21 91/31
CGA ATC TAC TTG AAA TAC ATT CGA TTG CTT CTC TCT GTT TAA GCT TCA GAG TCT CTG CTA
R I Y L K Y I R L L L S V * A S E S L L
121/41 151/51
ATT ATG GGT TCG AAT AAT TTA GCT AAT TCG ATT GAA TCG ATG TTA GGA ATA TCA ATA GGA
I M G S N N L A N S I E S M L G I S I G
181/61 211/71
TCA GAA TAT ATT TCT GAC CCA ATT TTC ATT ATG GTC ACA ACT GTC GCT TCA ATG CTG ATT
S E Y I S D P I F I M V T T V A S M L I
241/81 271/91
GGA TTT GGT TTC TTC GCA TGT ATG AAA TCT TCG TCT TCT CAA TCA AAA CCT ATT GAA ACT
G F G F F A C M K S S S S Q S K P I E T
301/101 331/111
TAT AAA CCA ATA ATT GAT AAA GAA GAA GAG GAG ATT GAA GTT GAT CCT GGT AAA ATT AAG
Y K P I I D K E E E E I E V D P G K I K
361/121 391/131
CTC ACT ATA TTT TTT GGT ACT CAG ACT GGT ACT GCT GAA GGA TTT GCT AAG GCA TTG GCA
L T I F F G T Q T G T A E G F A K A L A
421/141 451/151
GAA GAA ATT AAG GCA AAG TAC AAG AAA GCA GTT GTT AAA GTA GTT GAC CTG GAT GAC TAT
E E I K A K Y K K A V V K V V D L D D Y
481/161 511/171
GCA GCC GAG GAT GAT CAA TAT GAA GAG AAA TTA AAG AAA GAG TCT TTG GTG TTT TTC ATG
A A E D D Q Y E E K L K K E S L V F F M
541/181 571/191
GTA GCC ACT TAT GGT GAT GGT GAG CCA ACT GAC AAT GCT GCG AGA TTT TAC AAA TGG TTC
V A T Y G D G E P T D N A A R F Y K W F
601/201 631/211
ACT CAG GAA CAT GAA AGG GGA GAG TGG CTT CAG CAA CTA ACT TAT GGT GTT TTT GGT TTG
T Q E H E R G E W L Q Q L T Y G V F G L
661/221 691/231
GGT AAC CGT CAA TAC GAG CAT TTC AAC AAG ATC GCG GTA GAT GTG GAT GAG CAA CTC GGT
G N R Q Y E H F N K I A V D V D E Q L G
721/241 751/251
AAA CAA GGT GCA AAG CGC ATT GTT CAA GTG GGG CTC GGT GAC GAT GAT CAA TGC ATT GAA
K Q G A K R I V Q V G L G D D D Q C I E
781/261 811/271
GAT GAT TTT ACT GCT TGG CGA GAA TTG TTC TGG ACT GAA TTG GAT CAG TTG CTC AAA GAT
D D F T A W R E L L W T E L D Q L L K D
841/281 871/291
GAG GAT GCT GCT CCT TCA GTG GCT ACA CCG TAT ATT GCT ACT GTT CCT GAA TAC AGG GTA
E D A A P S V A T P Y I A T V P E Y R V
901/301 931/311
GTG ATT CAC GAA ACT ACG GTC GCG GCT CTG GAT GAT AAA CAC ATA AAT ACT GCT AAC GGC
V I H E T T V A A L D D K H I N T A N G
961/321 991/331
GAT GTT GCA TTT GAT ATT CTC CAT CCT TGC AGA ACC ATT GTT GCT CAA CAA AGA GAG CTC
D V A F D I L H P C R T I V A Q Q R E L
1021/341 1051/351

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FIG. 9a (2)

CAC AAA CCC AAG TCT GAT AGA TCC TGT ATA CAT CTG GAG TTC GAC ATA TCA GGC TCT TCC
H K P K S D R S C I H L E F D I S G S S S
1081/361 1111/371
CTT ACA TAT GAG ACT GGA GAT CAT GTT GGT GTT TAT GCT GAG AAC TGC GAT GAA ACT GTC
L T Y E T G D H V G V Y A E N C D E T V
1141/381 1171/391
GAG GAA GCA GGG AAG CTG TTG GGT CAA CCC CTG GAT TTG CTG TTT TCA ATT CAC ACG GAT
E E A G K L L G Q P L D L L F S I H T D
1201/401 1231/411
AAA GAA GAC GGG TCA CCC CAG GGA AGC TCA TTA CCA CCT CCT TTC CCA GGT CCT TGC ACC
K E D G S P Q G S S L P P P F P G P C T
1261/421 1291/431
TTA CGA TCT GCC CTA GCA CGC TAT GCT GAT CTT TTG AAT CCT CCT AGA AAG GCT TCT CTG
L R S A L A R Y A D L L N P P R K A S L
1321/441 1351/451
ATT GCT CTG TCC GCT CAT GCA TCT GTA CCC AGT GAA GCA GAG AGA TTG CGC TTT TTG TCA
I A L S A H A S V P S E A E R L R F L S
1381/461 1411/471
TCA CCT CTG GGA AAG AAT GAG TAT TCA AAA TGG GTA GTT GGA AGT CAG AGG AGT CTT TTG
S P L G K N E Y S K W V V G S Q R S L L
1441/481 1471/491
GAG ATC ATG GCC GAG TTT CCA TCA GCA AAA CCC CCT CTT GGT GTT TTC TTT GCT GCA GTA
E I M A E F P S A K P P L G V F F A A V
1501/501 1531/511
GCC CCT CGC TTA CCG CCT CGA TAC TAT TCT ATC TCA TCC TCT CCT AAG TTT GCT CCC TCA
A P R L P P R Y Y S I S S S P K F A P S
1561/521 1591/531
AGA ATT CAT GTG ACG TGT GCT TTA GTA TAT GGT CAA AGC CCT ACC GGA AGG GTT CAC CGA
R I H V T C A L V Y G Q S P T G R V H R
1621/541 1651/551
GGA GTG TGT TCG ACA TGG ATG AAG CAT GCA GTT CCT CAG GAT AGC TGG GCT CCT ATT TTT
G V C S T W M K H A V P Q D S W A P I F
1681/561 1711/571
GTT CGA ACG TCA AAC TTC AAG TTA CCA GCT GAC CCC TCA ACT CCA ATT ATC ATG GTG GGA
V R T S N F K L P A D P S T P I I M V G
1741/581 1771/591
CCT GGT ACA GGG TTA GCT CCT TTC AGA GGA TTT CTG CAG GAA AGA ATG GCC CTC AAG GAA
P G T G L A P F R G F L Q E R M A L K E
1801/601 1831/611
AAT GGT GCT CAA CTT GGC CCA GCA GTG CTC TTT TTC GGA TGT AGG AAT CGT AAT ATG GAC
N G A Q L G P A V L F F G C R N R N M D
1861/621 1891/631
TTC ATT TAT GAA GAC GAA CTA AAC AAC TTC GTG GAA CGA GGA GTA ATT TCG GAG CTA GTT
F I Y E D E L N N F V E R G V I S E L V
1921/641 1951/651
ATT GCC TTT TCA CGT GAA GGG GAA AAG AAG GAA TAT GTT CAA CAT AAG ATG ATG GAG AAA
I A F S R E G E K K E Y V Q H K M M E K
1981/661 2011/671
GCA ACG GAT GTA TGG AAT GTG ATA TCA GGG GAC GGT TAT CTC TAT GTG TGT GGT GAT GCC
A T D V W N V I S G D G Y L Y V C G D A
2041/681 2071/691

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FIG. 9a (3)

AAG GGA ATG GCC AGA GAT GTC CAT CGC ACG TTG CAT ACC ATT GCC CAA GAA CAG GGA CCC
K G M A R D V H R T L H T I A Q E Q G P
2101/701 2131/711
ATG GAA TCA TCT GCT GCC GAA GCT GCA GTA AAG AAA CTC CAA GTT GAA GAA CGA TAT CTA
M E S S A A E A A V K K L Q V E E R Y L
2161/721 2191/731
AGA GAT GTC TGG TGA TCG AAT GTA GCT TGC CAA GTC CCC TTT TCT TGG CTG GTC TGT TTA
R D V W * S N V A C Q V P F S W L V C L
2221/741 2251/751
TGG TTT CTA TTA TAT TAT TGA TCC TCC TCT GAA AAT CCC AAG CAC TTC CAG ACA TCC CTC
W F L L Y Y * S S S E N P K H F Q T S L
2281/761 2311/771
GAT TCT TCC TCC AGT GGT TCC AAA TCG AAG CTC GGT ATA ATT GAG AGC AGT GCA ATT GTG
D S S S G S K S K L G I I E S S A I V
2341/781 2371/791
ACT ACA TGA GAA GCA AAC ATC GAA TAC CAT AGA ATT AGA AAG ATC AAA ATT CTC TTA TCA
T T * E A N I E Y H R I R K I K I L L S
2401/801 2431/811
GAA CAA TGT TAC AGG CAA AAC TGT GTT TGC TTA ATA TAA ATT TCA CAC CAT GGG TGT GGA
E Q C Y R Q N C V C L I * I S H H G C G
2461/821 2491/831
CAA CAC TGA AAC AGT ATT AGC TAT ACC AAC AAA GTT ATG CAA GGA AAC ACA AAC TAG TTA
Q H * N S I S Y T N K V M Q G N T N * L
2521/841 2551/851
GAT CTT CTC TTT GGA TTG ATT ACT GTA AGT TCT AAC CAG ATG ATA GAT TGT ACT TAA AGA
D L L F G L I T V S S N Q M I D C T * R
2581/861 2611/871
TTC TTG TTT TCT TAT GGC TAC CGA GAG GAG TAT ATT AAT GCA TTT AGA GTT TTG AGA AAA
F L F S Y G Y R E E Y I N A F R V L R K
2641/881
AAA AAA AAA A
K K K

14/20

FIG. 9b (1)

1/1 31/11
TTC TTC TTC CAA TCG CAT TCG AGA AAA TTC AAT CAT CTT CAA CTT CAG GAA GAA GAA TCA
F F F Q S H S R K F N H L Q L Q E E E S
61/21 91/31
TCA GAA ACA CTG AAG CTC ATC ATC ATC CTT GAA ACT TAT CGT CTT TGT TTG ACC TTT TGA
S E T L K L I I I L E T Y R L C L T F *
121/41 151/51
AAA ACT ATG GAA CAA ACT GCG GTT AAA GTC TCT TTG TTT GAT CTA TTT TCT TCG ATA CTT
K T M E Q T A V K V S L F D L F S S I L
181/61 211/71
AAT GGA AAG TTG GAT CCG TCG AAC TTT TCT TCA GAT TCA AGT GCT GCT ATT TTG ATT GAA
N G K L D P S N F S S D S S A A I L I E
241/81 271/91
AAT CGT GAG ATT TTA ATG ATC TTA ACA ACT GCT ATT GCT GTT TTT ATC GGT TGT GGT TTT
N R E I L M I L T T A I A V F I G C G F
301/101 331/111
CTC TAC GTT TGG AGA AGA TCT TCA AAT AAG TCG AGT AAA ATT GTT GAA ACT CAG AAA TTG
L Y V W R R S S N K S S K I V E T Q K L
361/121 391/131
ATC GTT GAA AAG GAA CCA GAA CCT GAA GTT GAT GAT GGA AAG AAG AAG GTT ACT ATC TTC
I V E K E P E P E V D D G K K K V T I F
421/141 451/151
TTT GGT ACT CAA ACT GGT ACA GCT GAA GGA TTC GCA AAG GCA CTT GCT GAA GAA GCA AAA
F G T Q T G T A E G F A K A L A E E A K
481/161 511/171
GCA AGA TAT GAA AAG GCA ATC TTT AAA GTG ATT GAT CTG GAT GAT TAC GGA GCA GAT GAT
A R Y E K A I F K V I D L D D Y G A D D
541/181 571/191
GAT GAA TTC GAA GAG AAA TTG AAA AAG GAA ACT ATA GCT CTT TTC TTT TTG GCT ACC TAT
D E F E E K L K K E T I A L F F L A T Y
601/201 631/211
GGA GAT GGT GAA CCT ACA GAT AAT GCT GCA AGA TTT TAT AAA TGG TTC ACA GAG GGA GAG
G D G E P T D N A A R F Y K W F T E G E
661/221 691/231
AGG GAA ATG TGG CTC CAG AAT CTT CAA TTT GGT GTC TTC GGT CTA GGC AAT AGA CAG TAT
R E M W L Q N L Q F G V F G L G N R Q Y
721/241 751/251
GAG CAT TTC AAT AAG GTG GCA AAG GAG GTG GAC GAG ATA CTC ACT GAA CAG GGT GGG AAG
E H F N K V A K E V D E I L T E Q G G K
781/261 811/271
CGT ATT GTT CCC GTG GGT CTA GGA GAT GAT GAT CAA TGC ATA GAA GAT GAT TTC ACT GCG
R I V P V G L G D D D Q C I E D D F T A
841/281 871/291
TGG CGG GAG TTG GTA TGG CCT GAA TTG GAT CAG TTG CTC CTT GAT GAA AGT GAT AAA ACA
W R E L V W P E L D Q L L D E S D K T
901/301 931/311
TCT GTT TCT ACT CCT TAC ACT GCC ATC GTA CCA GAA TAC AGG GTA GTA TTC CAT GAT GCT
S V S T P Y T A I V P E Y R V V F H D A
961/321 991/331
ACT GAT GCA TCA CTA CAA GAC AAA AAC TGG AGC AAT GCA AAT GGC TAC ACT GTT TAC GAC
T D A S L Q D K N W S N A N G Y T V Y D
1021/341 1051/351

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FIG. 9b (2)

GTT CAA CAC CCA TGC AGA GCC AAT GTC GTT GTA AAG AAG GAG CTT CAC ACT CCA GTA TCT
V Q H P C R A N V V V K K E L H T P V S
1081/361 1111/371
GAT CGT TCT TGT ATT CAT CTG GAA TTT GAC ATT TCT GGC ACT GGG CTC ACG TAT GAA ACA
D R S C I H L E F D I S G T G L T Y E T
1141/381 1171/391
GGA GAC CAT GTC GGT GTT TAC TCT GAG AAT TGT GTT GAA GTT GTC GAG GAA GCA GAG AGG
G D H V G V Y S E N C V E V V E E A E R
1201/401 1231/411
CTA TTG GGT TAC TCA TCA GAC ACC GTT TTT TCA ATC CAT GTC GAT AAA GAG GAC GGC TCA
L L G Y S S D T V F S I H V D K E D G S
1261/421 1291/431
CCC ATT AGT GGA AGC GCT CTA GCT CCT CCT TTT CCA ACT CCC TGC ACT CTA AGA ACA GCA
P I S G S A L A P P F P T P C T L R T A
1321/441 1351/451
CTA ACA CGA TAC GCT GAT CTG TTG AAT TCT CCC AAG AAG GCT GCT CTG CAT GCT TTG GCT
L T R Y A D L L N S P K K A A L H A L A
1381/461 1411/471
GCT TAT GCA TCC GAT CCA AAG GAA GCG GAG CGA CTA AGG TAT CTT GCG TCT CCT GCT GGG
A Y A S D P K E A E R L R Y L A S P A G
1441/481 1471/491
AAG GAC GAA TAC GCC CAG TGG ATA GTA GCT AGT CAG AGA AGT CTG CTA GTG GTC ATG GCT
K D E Y A Q W I V A S Q R S L L V V M A
1501/501 1531/511
GAA TTC CCA TCA GCA AAG GCT CCA ATT GGG GTT TTC TTT GCA GCA GTA GCT CCT CGC TTG
E F P S A K A P I G V F F A A V A P R L
1561/521 1591/531
CTG CCA AGA TAC TAT TCT ATT TCA TCT TCC AAT AGG ATG GTA CCA TCT AGG ATT CAT GTC
L P R Y Y S I S S S N R M V P S R I H V
1621/541 1651/551
ACA TGT GCA TTG GTG CAT GAA AAA ACA CCG GCA GGT CGG GTT CAC AAA GGA GTG TGT TCA
T C A L V H E K T P A G R V H K G V C S
1681/561 1711/571
ACC TGG ATG AAG AAT TCT GTG TCT TTG GAA GAA AAC CAT GAT TGC AGC AGC TGG GCA CCA
T W M K N S V S L E E N H D C S S W A P
1741/581 1771/591
ATC TTT GTC AGG CAA TCC AAC TTC AAA CTT CCT GCT GAT TCT ACA GTA CCA ATT ATA ATG
I F V R Q S N F K L P A D S T V P I I M
1801/601 1831/611
ATT GGT CCT GGG ACT GGA TTA GCT CCC TTT AGG GGA TTC ATG CAG GAG CGA TTA GCT CTG
I G P G T G L A P F R G F M Q E R L A L
1861/621 1891/631
AAG AAT TCT GGT GTA GAA TTG GGA CCC GCT ATC CTC TTC TTT GGA TGC AGA AAC AGA CAG
K N S G V E L G P A I L F F G C R N R Q
1921/641 1951/651
ATG GAT TAC ATA TAT GAA GAG GAG CTA AAC AAC TTT GTG AAA GAG GGA GCT ATC TCC GAA
M D Y I Y E E E L N N F V K E G A I S E
1981/661 2011/671
GTT GTT GCT TTC TCA CGT GAG GGA GCT ACC AAG GAA TAC GTA CAA CAT AAA ATG GCG
V V V A F S R E G A T K E Y V Q H K M A
2041/681 2071/691

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FIG. 9b (3)

GAG AAG GCT TCC TAC ATC TGG GAA ATG ATC TCT CAA GGT GCT TAT CTT TAT GTA TGT GGT
E K A S Y I W E M I S Q G A Y L Y V C G
2101/701 2131/711
GAT GCC AAG GGC ATG GCT AGA GAC GTA CAT CGA ACT CTC CAC ACC ATT GCC CAG GAA CAG
D A K G M A R D V H R T L H T I A Q E Q
2161/721 2191/731
GGA TCT TTG GAC AAC TCG AAG ACC GAA AGC TTG GTG AAG AAT CTA CAG ATG GAT GGA AGG
G S L D N S K T E S L V K N L Q M D G R
2221/741 2251/751
TAT CTA CGT GAT GTG TGG TGA TTG ATT TTT TCA GCA CGG TTA CAA TCT AGC TTC ATC AAA
Y L R D V W * L I F S A R L Q S S F I K
2281/761 2311/771
GAA CGC GCT TGA GAA GCA TAA ATC TTA GTT GCA GAG ATG TTG ATT TCA GAA GAA ATG CTT
E R A * E A * I L V A E M L I S E E M L
2341/781 2371/791
TAT ATA CTT GAG GTA GCG GAC ATT AAT CCT TTT CTC TCT CTC TAA ACT GTT AAT CCT GTA
Y I L E V A D I N P F L S L * T V N P V
2401/801 2431/811
AAA AAG GGA TTG CTG TTT GTG TTT GCT CGC AAT CAA TTA AGT TAT ATT CTT TGG TCT ATG
K K G L L F V F A R N Q L S Y I L W S M
2461/821 2491/831
GCA TTC GTT AGA CAA ATA TAT TAA CGA GTT TGT CCG TTA TAT ATG ACA TAT GAA ACA AAA
A F V R Q I Y * R V C P L Y M T Y E T K
2521/841 2551/851
GAA CTT CTG TTT GGA GGA AGA GAA AAA AAA AAA AAA AA
E L L F G G R E K K K K

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FIG. 10a (1)

1 AAGCTTCAGAGTCTCTGCTAATT ATG GGT TCG AAT AAT TTA GCT AAT TCG ATT GAA TCG ATG TTA 65
1 M G S N N L A N S I E S M L 14

66 GGA ATA TCA ATA GGA TCA GAA TAT ATT TCT GAC CCA ATT TTC ATT ATG GTC ACA ACT GTA 125
15 G I S I G S E Y I S D P I F I M V T T V 34

126 GCT TCA ATG CTG ATT GGA TTT GGT TTC TGC TGT ATG AAA TCT TCG TCT CAA TCA 185
35 A S M L I G F F A C M K S S S S Q S 54

186 AAA CCT ATT GAA ACT TAT AAA CCA ATA ATT GAT AAA GAA GAA GAG GAG ATT GAA GTT GAT 245
55 K P I E T Y K P I I D K E E E E I E V D 74

246 CCT GGT AAA ATT AAG CTC ACT ATA TTT TTT GGT ACT CAG ACT GGT ACT GCT GAA GGA TTT 305
75 P G K I K L T I F F G T Q T G T A E G F 94

306 GCT AAG GCA TTG GCA GAA GAA ATT AAG GCA AAG TAC AAG AAA GCA GTT GTT AAA GTA GTT 365
95 A K A L A E E I K A K Y K K A V V V K V V 114

366 GAC CTG GAT GAC TAT GCA GCC GAG GAT GAT CAA TAT GAA GAG AAA TTA AAG AAA GAG TCT 425
115 D L D D Y A A E D D Q Y E E K L K K E S 134

426 TTG GTG TTT TTC ATG GTA GCC ACT TAT GGT GAT GGT GAG CCA ACT GAC AAT GCT GCG AGA 485
135 L V F F M V A T Y G D G E P T D N A A R 154

486 TTT TAC AAA TGG TTC ACT CAG GAA CAT GAA AGG GGA GAG TGG CTT CAG CAA CTA ACT TAT 545
155 F Y K W F T Q E H E R G E W L Q Q L T Y 174

546 GGT GTT TTT GGT TTG GGT AAC CGT CAA TAC GAG CAT TTC AAC AAG ATC GCG GTA GAT GTG 605
175 G V F G L G N R Q Y E H F N K I A V D V 194

606 GAT GAG CAA CTC GGT AAA CAA GGT GCA AAG CGC ATT GTT CAA GTG GGG CTC GGT GAC GAT 665
195 D E Q L G K Q G A K R I V Q V G L G D D 214

666 GAT CAA TGC ATT GAA GAT GAT TTT ACT GCT TGG CGA GAA TTG TTG TGG ACT GAA TTG GAT 725
215 D Q C I E D D F T A W R E L L W T E L D 234

726 CAG TTG CTC AAA GAT GAG GAT GCT GCT CCT TCA GTG GCT ACA CCG TAT ATT GCT ACT GTT 785
235 Q L L K D E D A A P S V A T P Y I A T V 254

786 CCT GAA TAC AGG GTA GTG ATT CAC GAA ACT ACG GTC GCG GCT CTG GAT GAT AAA CAC ATA 845
255 P E Y R V V I H E T T V A A L D D K H I 274

846 AAT ACT GCT AAC GGC GAT GTT GCA TTT GAT ATT CTC CAT CCT TGC AGA ACC ATT GTT GCT 905
275 N T A N G D V A F D I L H P C R T I V A 294

906 CAA CAA AGA GAG CTC CAC AAA CCC AAG TCT GAT AGA TCC TGT ATA CAT CTG GAG TTC GAC 965
295 Q Q R E L H K P K S D R S C I H L E F D 314

966 ATA TCA GGC TCT TCC CTT ACA TAT GAG ACT GGA GAT CAT GTT GGT GTT TAT GCT GAG AAC 1025
315 I S G S S L T Y E T G D H V G V Y A E N 334

1026 TGC GAT GAA ACT GTC GAG GAA GCA GGG AAG CTG TTG GGT CAA CCC CTG GAT TTG CTG TTT 1085
335 C D E T V E E A G K L L G Q P L D L L F 354

1086 TCA ATT CAC ACG GAT AAA GAA GAC GGG TCA CCC CAG GGA AGC TCA TTA CCA CCT CCT TTC 1145
355 S I H T D K E D G S P Q G S S L P P P F 374

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FIG. 10a (2)

1146 CCA GGT CCT TGC ACC TTA CGA TCT GCC CTA GCA CGC TAT GCT GAT CTT TTG AAT CCT CCT 1205
375 P G P C T L R S A L A R Y A D L L N P P 394

1206 AGA AAG GCT TCT CTG ATT GCT CTG TCC GCT CAT GCA TCT GTA CCC AGT GAA GCA GAG AGA 1265
395 R K A S L I A L S A H A S V P S E A E R 414

1266 TTG CGC TTT TTG TCA TCA CCT CTG GGA AAG AAT GAG TAT TCA AAA TGG GTA GTT GGA AGT 1325
415 L R F L S S P L G K N E Y S K W V V G S 434

1326 CAG AGG AGT CTT TTG GAG ATC ATG GCC GAG TTT CCA TCA GCA AAA CCC CCT CTT GGT GTT 1385
435 Q R S L L E I M A E F P S A K P P L G V 454

1386 TTC TTT GCT GCA GTA GCC CCT CGC TTA CCG CCT CGA TAC TAT TCT ATC TCA TCC TCT CCT 1445
455 F F A A V A P R L P P R Y Y S I S S S P 474

1446 AAG TTT GCT CCC TCA AGA ATT CAT GTG ACG TGT GCT TTA GTA TAT GGT CAA AGC CCT ACC 1505
475 K F A P S R I H V T C A L V Y G Q S P T 494

1506 GGA AGG GTT CAC CGA GGA GTG TGT TCG ACA TGG ATG AAG CAT GCA GTT CCT CAG GAT AGC 1565
495 G R V H R G V C S T W M K H A V P Q D S 514

1566 TGG GCT CCT ATT TTT GTT CGA ACG TCA AAC TTC AAG TTA CCA GCT GAC CCC TCA ACT CCA 1625
515 W A P I F V R T S N F K L P A D P S T P 534

1626 ATT ATC ATG GTG GGA CCT GGT ACA GGG TTA GCT CCT TTC AGA GGA TTT CTG CAG GAA AGA 1685
535 I I M V G P G T G L A P F R G F L Q E R 554

1686 ATG GCC CTC AAG GAA AAT GGT GCT CAA CTT GGC CCA GCA GTG CTC TTT TTC GGA TGT AGG 1745
555 M A L K E N G A Q L G P A V L F F G C R 574

1746 AAT CGT AAT ATG GAC TTC ATT TAT GAA GAC GAA CTA AAC AAC TTC GTG GAA CGA GGA GTA 1805
575 N R N M D F I Y E D E L N N F V E R G V 594

1806 ATT TCG GAG CTA GTT ATT GCC TTT TCA CGT GAA GGG GAA AAG AAG GAA TAT GTT CAA CAT 1865
595 I S E L V I A F S R E G E K K E Y V Q H 614

1866 AAG ATG ATG GAG AAA GCA ACG GAT GTA TGG AAT GTG ATA TCA GGG GAC GGT TAT CTC TAT 1925
615 K M M E K A T D V W N V I S G D G Y L Y 634

1926 GTG TGT GGT GAT GCC AAG GGA ATG GCC AGA GAT GTC CAT CGC ACG TTG CAT ACC ATT GCC 1985
635 V C G D A K G M A R D V H R T L H T I A 654

1986 CAA GAA CAG GGA CCC ATG GAA TCA TCT GCT GCC GAA GCT GCA GTA AAG AAA CTC CAA GTT 2045
655 Q E Q G P M E S S A A E A A V K K L Q V 674

2046 GAA GAA CGA TAT CTA AGA GAT GTC TGG TGA TCGA ATG TAG CTTGCCAAtcactag 2100
675 E E R Y L R D V W * M * 2

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FIG. 10b (1)

1 tgcagccggggatccgccCT ATG GAA CAA ACT GCG GTT AAA GTC TCT TTG TTT GAT CTA TTT 64
1 M E Q T A V K V S L F D L F 14

65 TCT TCG ATA CTT AAT GGA AAG TTG GAT CCG TCG AAC TTT TCT TCA GAT TCA AGT GCT GCT 124
15 S S I L N G K L D P S N F S S D S S A A 34

125 ATT TTG ATT GAA AAT CGT GAG ATT TTA ATG ATC TTA ACA ACT GCT ATT GCT GTT TTT ATC 184
35 I L I E N R E I L M I L T T A I A V F I 54

185 GGT TGT GGT TTT CTC TAC GTT TGG AGA AGA TCT TCA AAT AAG TCG AGT AAA ATT GTT GAA 244
55 G C G F L Y V W R R S S N K S S K I V E 74

245 ACT CAG AAA TTG ATC GTT GAA AAG GAA CCA GAA CCT GAA GTT GAT GAT GGA AAG AAG AAG 304
75 T Q K L I V E K E P E P E V D D G K K K 94

305 GTT ACT ATC TTC TTT GGT ACT CAA ACT GGT ACA GCT GAA GGA TTC GCA AAG GCA CTT GCT 364
95 V T I F F G T Q T G T A E G F A K A L A 114

365 GAA GAA GCA AAA GCA AGA TAT GAA AAG GCA ATC TTT AAA GTG ATT GAT CTG GAT GAT TAC 424
115 E E A K A R Y E K A I F K V I D L D D Y 134

425 GGA GCA GAT GAT GAT GAA TTC GAA GAG AAA TTG AAA AAG GAA ACT ATA GCT CTT TTC TTT 484
135 G A D D D E F E E K L K K E T I A L F F 154

485 TTG GCT ACC TAT GGA GAT GGT GAA CCT ACA GAT AAT GCT GCA AGA TTT TAT AAA TGG TTC 544
155 L A T Y G D G E P T D N A A R F Y K W F 174

545 ACA GAG GGA GAG AGG GAA ATG TGG CTC CAG AAT CTT CAA TTT GGT GTC TTC GGT CTA GGC 604
175 T E G E R E M W L Q N L Q F G V F G L G 194

605 AAT AGA CAG TAT GAG CAT TTC AAT AAG GTG GCA AAG GAG GTG GAC GAG ATA CTC ACT GAA 664
195 N R Q Y E H F N K V A K E V D E I L T E 214

665 CAG GGT GGG AAG CGT ATT GTT CCC GTG GGT CTA GGA GAT GAT GAT CAA TGC ATA GAA GAT 724
215 Q G G K R I V P V G L G D D D Q C I E D 234

725 GAT TTC ACT GCG TGG CGG GAG TTG GTA TGG CCT GAA TTG GAT CAG TTG CTC CTT GAT GAA 784
235 D F T A W R E L V W P E L D Q L L D E 254

785 AGT GAT AAA ACA TCT GTT TCT ACT CCT TAC ACT GCC ATC GTC CCA GAA TAC AGG GTA GTA 844
255 S D K T S V S T P Y T A I V P E Y R V V 274

845 TTC CAT GAT GCT ACT GAT GCA TCA CAA GAC AAA AAC TGG AGC AAT GCA AAT GGC TAC 904
275 F H D A T D A S L Q D K N W S N A N G Y 294

905 ACT GTT TAC GAC GTT CAA CAC CCA TGC AGA GCC AAT GTC GTT GTA AAG AAG GAG CTT CAC 964
295 T V Y D V Q H P C R A N V V V K K E L H 314

965 ACT CCA GTA TCT GAT CGT TCT TGT ATT CAT CTG GAA TTT GAC ATT TCT GGC ACT GGG CTC 1024
315 T P V S D R S C I H L E F D I S G T G L 334

1025 ACG TAT GAA ACA GGA GAC CAT GTC GGT GTT TAC TCT GAG AAT TGT GTT GAA GTT GTC GAG 1084
335 T Y E T G D H V G V Y S E N C V E V V E 354

1083 GAA GCA GAG AGG CTA TTG GGT TAC TCA TCA GAC ACC GTT TTT TCA ATC CAT GTC GAT AAA 1144
355 E A E R L L G Y S S D T V F S I H V D K 374

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FIG. 10b (2)

1145 GAG GAC GGC TCA CCC ATT AGT GGA AGC GCT CTA GCT CCT CCT TTT CCA ACT CCC TGC ACT 1204
375 E D G S P I S G S A L A P P F P T P C T 394

1205 CTA AGA ACA GCA CTA ACA CGA TAC GCT GAT CTG TTG AAT TCT CCC AAG AAG GCT GCT CTG 1264
395 L R T A L T R Y A D L L N S P K K A A L 414

1265 CAT GCT TTG GCT GCT TAT GCA TCC GAT CCA AAG GAA GCG GAG CGA CTA AGG TAT CTT GCG 1324
415 H A L A A Y A S D P K E A E R L R Y L A 434

1325 TCT CCT GCT GGG AAG GAC GAA TAC GCC CAG TGG ATA GTA GCT AGT CAG AGA AGT CTG CTA 1384
435 S P A G K D E Y A Q W I V A S Q R S L L 454

1385 GTG GTC ATG GCT GAA TTC CCA TCA GCA AAG GCT CCA ATT GGG GTT TTC TTT GCA GCA GTA 1444
455 V V M A E F P S A K A P I G V F F A A V 474

1445 GCT CCT CGC TTG CTG CCA AGA TAC TAT TCT ATT TCA TCT TCC AAT AGG ATG GTA CCA TCT 1504
475 A P R L L P R Y Y S I S S S N R M V P S 494

1505 AGG ATT CAT GTC ACA TGT GCA TTG GTG CAT GAA AAA ACA CCG GCA GGT CGG GTT CAC AAA 1564
495 R I H V T C A L V H E K T P A G R V H K 514

1565 GGA GTG TGT TCA ACC TGG ATG AAG AAT TCT GTG TCT TTG GAA GAA AAC CAT GAT TGC AGC 1624
515 G V C S T W M K N S V S L E E N H D C S 534

1625 AGC TGG GCA CCA ATC TTT GTC AGG CAA TCC AAC TTC AAA CTT CCT GCT GAT TCT ACA GTA 1684
535 S W A P I F V R Q S N F K L P A D S T V 554

1685 CCA ATT ATA ATG ATT GGT CCT GGG ACT GGA TTA GCT CCC TTT AGG GGA TTC ATG CAG GAG 1744
555 P I I M I G P G T G L A P F R G F M Q E 574

1745 CGA TTA GCT CTG AAG AAT TCT GGT GTA GAA TTG GGA CCC GCT ATC CTC TTC TTT GGA TGC 1804
575 R L A L K N S G V E L G P A I L F F G C 594

1805 AGA AAC AGA CAG ATG GAT TAC ATA TAT GAA GAG GAG CTA AAC AAC TTT GTG AAA GAG GGA 1864
595 R N R Q M D Y I Y E E E L N N F V K E G 614

1865 GCT ATC TCC GAA GTT GTT GCT TTC TCA CGT GAG GGA GCT ACC AAG GAA TAC GTA CAA 1924
615 A I S E V V V A F S R E G A T K E Y V Q 634

1925 CAT AAA ATG GCG GAG AAG GCT TCC TAC ATC TGG GAA ATG ATC TCT CAA GGT GCT TAT CTT 1984
635 H K M A E K A S Y I W E M I S Q G A Y L 654

1985 TAT GTA TGT GGT GAT GCC AAG GGC ATG GCT AGA GAC GTA CAT CGA ACT CTC CAC ACC ATT 2044
655 Y V C G D A K G M A R D V H R T L H T I 674

2045 GCC CAG GAA CAG GGA TCT TTG GAC AAC TCG AAG ACC GAA AGC TTG GTG AAG AAT CTA CAG 2104
675 A Q E Q G S L D N S K T E S L V K N L Q 694

2105 ATG GAT GGA AGG TAT CTA CGT GAT GTG TGG TGA TTGgggctagagcggcc 2154
695 M D G R Y L R D V W * 705